Illicit Discharge Detection And Elimination Action Levels
City of Portland
November 1, 2011

Analyte	Use/Rationale	Action Level	Comments
Temperature	Identify presence of process water, washwater, wastewater.	>18°C	Groundwater and potable water are generally below 15°C.
Conductivity	Distinguish between potable water and natural water.	>100 µS/cm	Portland potable water has very low conductivity.
	Distinguish between natural water and wastewater.	>500 µS/cm	Natural water should be below 500 µS/cm.
pH	Identify presence of liquid wastes from industrial sources.	<5; >9	Potable and natural water generally have a pH between 5.0 and 9.0.
Boron	Identify presence of wastewater.	>0.35 mg/L	Wastewater typically has concentrations >0.35 mg/L due to presence of borax.
Turbidity	Distinguish between process water and clean water (potable or natural).	10 NTU	Potable and natural water are typically very clear, except irrigation flow and shallow groundwater.
Ammonia	Distinguish between clean and contaminated water.	>0.5 mg/L	Natural and potable water have low ammonia concentrations.
Potassium	Identify presence of industrial waste water.	>10 mg/L	Many industrial process waters have high potassium levels.
Chlorine	Identify presence of potable water and natural water; industrial wastes.	>0.1 mg/L	If chlorine is >0.1 mg/L, the source is potable water or has a potable water component.
Chlorine	Identify presence of commercial or industrial liquid wastes.	>0.5 mg/L	If chlorine is above 0.5 mg/L, the source is likely industrial wastewater. The highest detected residual chlorine in potable water was 2 mg/L in the past 15 years, but it is typically much lower, especially after traveling some distance in a storm sewer. Over the past 15 years of IDDE monitoring, 37 of 983 samples exceeded 0.5 mg/L.
Hardness	Distinguish between potable water and natural water.	20 mg/L	Portland potable water < 13 mg/L; Portland groundwater >50 mg/L.
Color	Distinguish between potable water, groundwater, and process water.	Any color	Potable water has no color; groundwater often shows orange staining from iron precipitation; process water may have a variety of discolorations.
Ammonia/Potassium Ratio	Distinguish between wastewater and washwater if surfactants or boron are present above respective action levels.	1	Wastewater typically has a ratio of >1; washwater typically has a ratio of <1.